

WHAT IS CLAIMED IS:

1. A polyester polymerization catalyst containing no antimony or germanium whose activity parameter (AP) fulfills Formula [1] shown below and the thermal stability degree (TD) of a polyethylene terephthalate polymerized using which fulfills Formula [2] shown below without removing or inactivating said catalyst:

$$[1] AP \text{ (min)} < 2T(\text{min})$$

wherein AP is a time (min) required for a polymerization using the catalyst at 275°C under reduced pressure of 0.1 Torr to obtain a polyethylene terephthalate whose intrinsic viscosity is 0.5 dl/g. T is an AP observed when using antimony trioxide as a catalyst. The added amount of antimony trioxide is 0.05 mol% as antimony atom based on an acid component in a resultant polyethylene terephthalate; and,

$$[2] TD (\%) < 25$$

wherein TD is a % reduction in the intrinsic viscosity after keeping 1g of PET, whose initial intrinsic viscosity was 0.6 dl/g, in a glass tube as melt state under a nitrogen atmosphere at 300°C for 2 hours ,after drying the PET at 130°C for 12 hours in vacuum.

2. The polyester polymerization catalyst according to Claim 1 comprising at least one metal-containing component selected from metals and/or metal compounds containing no antimony nor germanium and an organic compound component.

3. The polyester polymerization catalyst according to Claim